

REMARKS

By the present Amendment, claims 1, 5, 6 and 9-14 are amended, claims 2 and 4 are cancelled, and claims 15-29 are added. This leaves claims 1, 3 and 5-29 pending in the application, with claims 1, 15, 21 and 26 being independent.

Claim Objections

Claims 10 and 13 are objected to on the grounds that "said gas side" in claim 10 lacks proper antecedent basis, and "a connection part" apparently appears to conflict with "stop part" described on page 8, last paragraph of the descriptive portion of the specification. Claim 10 is amended to refer to "said gas chamber" to provide proper antecedent basis. Claim 13 is revised to refer to a "stop part" as described in the specification.

With these corrections, the objections raised to claims 10 and 13 are obviated.

Rejection Under 35 U.S.C. § 112

Claim 5 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 5 is revised to more clearly state that the free edge shoulder of the second housing part faces the first housing part and that the free end of the additional housing is seated on that free edge shoulder.

Accordingly, claim 5 is definite and complies with the requirements of 35 U.S.C. § 112.

Rejections Under 35 U.S.C. §§ 102 and 103

Amended claim 1 constitutes original claim 4 rewritten in independent form, including the limitations of original claims 1, 2 and 4. Claims 3 and 5-14 depend from amended claim 1.

Claim 15 constitutes original claim 5 rewritten in independent form, including the limitations of original claims 1, 2 and 5. Claims 16-20 depend from claim 15.

Claim 21 constitutes original claim 8 rewritten in independent form, including the limitations of original claims 1, 2, 6 and 8. Since original claim 8 is indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, claim 21, as well as claims 22-25 depend from claim 21, should now be allowable. The record will not be burdened with further comments regarding claims 21-25.

Claim 26 constitutes original claim 9 rewritten in independent form, including the limitations of original claims 1, 2, 6 and 9. Since original claim 9 is indicated as being allowable if rewritten in independent form including the base claim and any intervening claims, claim 26, as well as claims 27-29 which depend from claim 26, should now be allowable. The record will not be burdened with further comments regarding claims 26-29.

Amended claim 1 covers a hydroaccumulator comprising an accumulator housing 10 with first and second housing parts 12 and 32, and a separating element 14 located in and dividing the accumulator housing into a gas chamber 20 and a fluid chamber 22. A gas refilling chamber 38 is formed by at least one additional housing part 34 connected with and forming a unit with accumulator housing 10. The additional housing part is on an outer lateral peripheral side of first housing part 12 defining the gas chamber. At least one connecting opening 36 is in the accumulator housing connecting gas refilling chamber 32 to gas chamber 20.

Claim 15 covers a hydroaccumulator comprising an accumulator housing 10 with first and second housing parts 12 and 32, and a separating element located in and dividing the accumulator housing into a gas chamber 20 and a fluid chamber 22. Second housing part 32 defines the fluid chamber and includes a shoulder 42 on a free edge facing first housing part 12. A gas refilling chamber 38 is formed by at least one additional housing part 34 connected with and forming a unit with the accumulator housing. A free end of the additional housing part is seated on the shoulder of free edge 42 of the first housing part. At least one connecting opening 36 is in the accumulator housing connecting the gas refilling chamber to gas chamber 20.

Original claims 1-5 and 14 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,474,215 to Richter. The Richter patent is cited for an accumulator having a separating element or a membrane 12 between a gas chamber 13 and a fluid chamber 14. An additional housing part 8 allegedly forms a gas refilling chamber and is allegedly connected with and forms a unit with the accumulator housing. A connecting opening 10 allegedly connects the gas refilling chamber to the gas chamber. In support of the rejection, it is contended that the additional housing part 8 is on the periphery of the first housing part and that free ends of the housing part and of the additional housing part are seated on the free edge of the second housing part.

However, the Richter additional housing part 8 is connected to the top of first housing part 2 at the juncture of cylindrical wall 4 and end wall 6. No portion of the additional housing part 8 overlaps the lateral periphery of the first housing part 2 defining the gas chamber. As such, the Richter patent does not anticipate or render obvious an additional housing part being on

an outer lateral peripheral side of the first housing part defining the gas chamber as recited in amended claim 1.

Additionally, the above described connection of the Richter additional housing part 8 to the first housing part 2 defining the gas chamber precludes the second housing part 3 from having a shoulder on the second housing part facing the first housing part, with the additional housing part being seated on that free edge shoulder of the second housing part defining the fluid chamber, as recited in claim 15. Thus, the Richter patent does not anticipate or render obvious the subject matter of claim 15.

Original claims 1-4 and 13 stand rejected as being anticipated by U.S. Patent No. 4,605,428 to Burton. The Burton patent is cited for an accumulator with an integrated gas filling chamber 32 having a first housing part 12, a second housing part 20 and an additional housing part 18.

However, the Burton accumulator has its additional housing part 18 connected to an intermediate tubular section 16, which is in turn connected to the epileptical head 20 forming the fluid chamber. The diaphragm protector 36 apparently is alleged to form the first housing part forming the fluid chamber, with this housing part being secured to the inner surface 12 of section 16. In this manner, the Burton additional housing 18 is spaced from and is not on an outer lateral peripheral side of the gas chamber housing part as recited in amended claim 1. Additionally, the Burton additional housing part 18 is spaced by section 16 from the second housing part 20 defining the fluid chamber such that an additional housing part free end is not on the housing part free edge as recited in claim 15. Accordingly, the Burton patent does not anticipate or render obvious the subject matter of amended claim 1 or claim 15.

Original claims 1-4, 6, 7 and 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,386,925 to Lane. The Lane patent is cited for an accumulator having a gas refilling chamber formed by an additional housing part 102 allegedly formed as a unit with the accumulator housing first part 114 and second part 138. Additional housing part 102 is viewed as being on the peripheral side of first housing part 114. The three housing parts are alleged to be connected to one another at a common connection point 144 which is preferably welded.

However, the Lane patent discloses an expansion tank including an upper cylindrical body 102 and a lower cylindrical body 104 which are each separately connected to the retaining ring 138 by welds at interface regions 146 and 148, respectively. In this manner, the Lane device has an accumulator housing with only a single housing part 104 forming both the gas chamber and the fluid chamber. Since the additional housing part 102 is axially spaced from the remainder of the accumulator housing 104, the additional housing part is not on an outer lateral peripheral side of the first part of the accumulator housing defining the gas chamber as recited in amended claim 1. Additionally, as apparently conceded by the failure to reject claim 5 over the Lane patent, it does not have a second housing part defining a fluid chamber with a shoulder, with the additional housing part being seated on the free edge defining that shoulder as recited in claim 15. Accordingly, amended claim 1 and new claim 15 are not anticipated or rendered obvious by the Lane patent.

Original claims 1-6 and 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,033,552 to Ogden. The Ogden patent is cited for an accumulator having first housing part 48 and a second housing part 32 separated by a membrane 26 to form a gas

chamber 38 and a fluid chamber 16. A gas refilling chamber is allegedly provided by an additional housing part 22. The first housing part 48 has openings 50. The second housing part 32 is alleged to have a free edge facing the first housing part on which the free end of housing 22 engages. The connection by bolts 34 is viewed as a common connection point. The additional housing part with chambers 36 and 58 is alleged to be twice the size of the volume 56 of the gas side relative to claim 12.

As clearly illustrated in Fig. 1 of the Ogden patent, rigid tubular member 22, allegedly forming with dished shaped member 30 a structure corresponding to the claimed additional housing part, is attached by bolts 34 to the top of a lateral peripheral flange of the dished shaped member 48 alleged to correspond to the claimed first housing part. The membrane 26 is clamped between the peripheral flanges of dished member 32 (allegedly corresponding to the claimed second housing part) and of dish shaped member 48 (allegedly corresponding to the claimed first housing part). Since the Ogden additional housing part 22 is mounted on the top of the Ogden first housing part 48, it is not on an outer lateral peripheral side of the first housing part as recited in amended claim 1. Additionally, since the Ogden first housing part 48 and membrane 26 separate the additional housing part 22 from the second housing part 32, the additional housing part free end is not seated on the free edge shoulder of the second housing part facing the first housing part as recited in claim 15. Accordingly, the Ogden patent does not anticipate or render obvious the subject matter of amended claim 1 or claim 15.

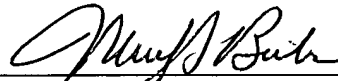
Claims 3 and 5-14 being dependent upon amended claim 1 and claim 16-20 being dependent upon claim 15, are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

Since the subject matter of claims 8, 9, 17 and 18 is indicated as being allowable, the record will not be burdened with further comments thereon.

Specifically, the separating membrane of claim 3, the additional housing free end on the free edge shoulder of the second housing part of claim 5, the common connecting point of claims 6 and 16, the weld of claim 7, the relative volumes of claims 10 and 19, the wall thicknesses of claims 11, 12 and 20, the fluid connection and stop part of claim 13, and the shapes of claim 14, are not anticipated or rendered obvious by the cited patents, particularly within the overall claimed combination.

In view of the foregoing, claims 1, 3 and 5-29 are allowable. Prompt and favorable action is solicited.

Respectfully submitted,



Mark S. Bicks
Reg. No. 28,770

ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P.
1300 19th Street, N.W., Suite 600
Washington, D.C. 20036
(202) 659-9076

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